

ABSTRACT OF THE DISCLOSURE

The invention relates to a voltage regulation system for multiword programming in non volatile memories, for example of the Flash type, with low circuit area occupation, wherein memories comprise at least a memory cell matrix organized in cell rows and columns and with corresponding circuits responsible for addressing, decoding, reading, writing and erasing the

5 memory cell content. The memory cells have drain terminals connected to matrix columns and are biased in the programming step with a predetermined voltage value by means of program load circuits associated to each matrix column. In parallel with each program load circuit, a conduction-to-ground path is enabled by a controlled active element.